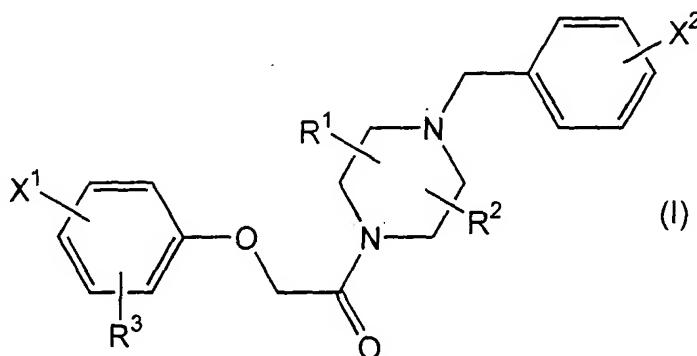


The following listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Amended) A method of diagnosing Alzheimer's disease in a human patient which comprises:

administering to a patient in need of such diagnosis a compound according compound
of formula (I):



wherein:

X¹ and X² are each independently halo;

R¹ and R² are each independently hydrogen or alkyl; and

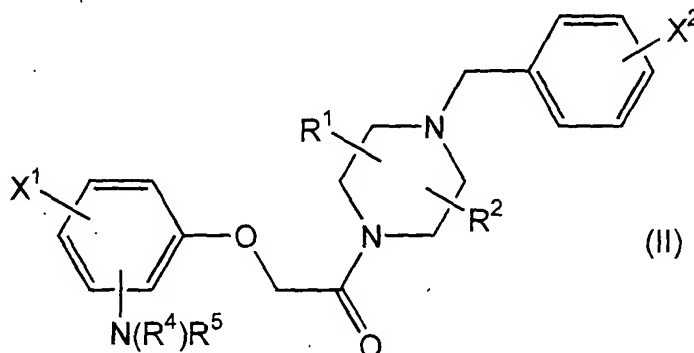
R³ is hydrogen, amino, monoalkylamino, dialkylamino, monoaralkylamino, alkylcarbonylamino, alkenylcarbonylamino, haloalkylcarbonylamino, arylcarbonylamino, alkoxyalkylcarbonylamino, alkoxycarbonylalkylcarbonylamino, glycinamido, monoalkylglycinamido, arylcarbonylglycinamido, aminocarbonylglycinamido, (aminocarbonyl)(alkyl)glycinamido, (alkoxyalkylcarbonyl)glycinamido, ureido, monoalkylureido, monoarylureido, monoaralkylureido, or alaninamido;

and wherein either one of X¹ or X² is selected from the group of ¹²³I, ¹²⁵I, ¹²⁸I, ¹³¹I, ⁷⁵Br, ⁷⁶Br, ⁸⁰Br and ¹⁸F; or wherein one of the carbon atoms in the compound is ¹¹C;

or a pharmaceutically acceptable salt thereof; and

measuring the radioactivity arising from the administration of the compound to said patient either by using a gamma camera or by positron emission tomography (PET).

2. (Amended) A method of diagnosing Alzheimer's disease in a human patient which comprises administering to said patient in need of such diagnosis a compound according to compound of formula (II):



wherein

X¹ and X² are each independently halo;

R¹ and R² are each independently hydrogen or alkyl; and

R⁴ is hydrogen; and

R⁵ is a group having a radical containing a chelator capable of binding a radioactive metal atom chosen from the group of ^{99m}Tc, ¹⁸⁶Re and ¹⁸⁸Re;

or as a complex with ^{99m}Tc, ¹⁸⁶Re and ¹⁸⁸Re;

or a pharmaceutically acceptable salt thereof; and

measuring the radioactivity arising from the administration of the compound to said patient either by using a gamma camera or by positron emission tomography (PET).

3. (Amended) A method compound according to claim 1, wherein said compound binds to chemokine receptor CCR1 and passes the blood-brain barrier.

4. (Amended) A method compound according to claim 2, wherein said compound binds to chemokine receptor CCR1 and passes the blood-brain barrier.

5. (Amended) A method compound according to claim 1, wherein R¹ is methyl at the 2-position of the piperazinyl radical and R² is methyl at the 5-position of the piperazinyl radical.

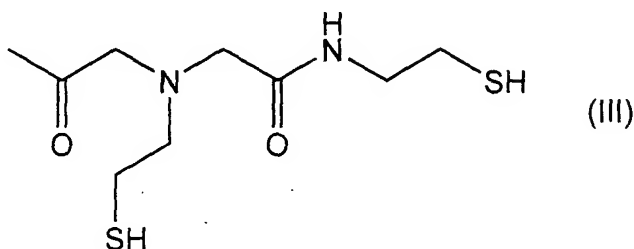
6. (Amended) A method compound according to claim 2, wherein R¹ is methyl at the 2-position of the piperazinyl radical and R² is methyl at the 5-position of the piperazinyl radical.

7. (Amended) A method compound according to claim 1, wherein R^1 is methyl at the 2-position of the piperazinyl radical and R^2 is hydrogen.

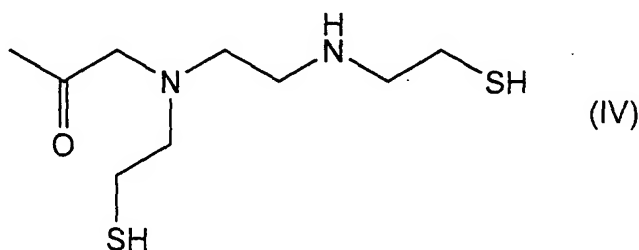
8. (Amended) A method compound according to claim 2, wherein R^1 is methyl at the 2-position of the piperazinyl radical and R^2 is hydrogen.

9. (Amended) A method compound of claim 1, wherein X^1 is chloro at the 4-position of the phenyl radical and X^2 is a ^{18}F atom at the 4-position of the phenyl radical.

10. (Amended) A method compound of claim 2, wherein R^5 ~~comprises a~~ said chelator structure is of formula (III):



11. (Amended) A method compound of claim 2, wherein R^5 ~~comprises a~~ said chelator structure is of formula (IV):



12. (Amended) A method compound of claim 10, wherein in group R^5 ~~further comprises~~ a linker moiety ~~comprising an alkyl radical having one to ten carbon atoms, wherein the alkyl radical optionally contains one to ten C(O) groups, one to ten C(O)N(R) groups, one to ten N(R)C(O) groups, one to ten N(R) groups, one to ten N(R)₂ groups, one to ten hydroxy groups, one to ten C(O)OR groups, one to ten oxygen atoms, one to ten sulfur atoms, one to ten nitrogen atoms, one to ten halogen atoms, and one to ten aryl groups, and one to ten~~

~~saturated or unsaturated heterocyclic rings wherein R is hydrogen or alkyl is present between said chelator and the remainder of the compound.~~

13. (Amended) A method ~~compound~~ of claim 11, wherein in group R⁵ ~~further comprises~~ a linker moiety ~~comprising an alkyl radical having one to ten carbon atoms, wherein the alkyl radical optionally contains one to ten C(O) groups, one to ten C(O)N(R) groups, one to ten N(R)C(O) groups, one to ten N(R) groups, one to ten N(R)₂ groups, one to ten hydroxy groups, one to ten C(O)OR groups, one to ten oxygen atoms, one to ten sulfur atoms, one to ten nitrogen atoms, one to ten halogen atoms, and one to ten aryl groups, and one to ten saturated or unsaturated heterocyclic rings wherein R is hydrogen or alkyl is present between said chelator and the remainder of the compound.~~

14. (Amended) A method ~~compound~~ of claim 12, wherein the linker moiety is -C(O)-CH₂-N(H).

15. (Amended) A method ~~compound~~ of claim 13, wherein the linker moiety is -C(O)-CH₂-N(H).

16. (Amended) A method compound according to claim 1, wherein said compound is a monochloride salt.
17. (Amended) A method compound according to claim 2, wherein said compound is a monochloride salt.
18. (Amended) A method compound according to claim 1, wherein said compound is a dichloride salt.
19. (Amended) A method compound according to claim 2, wherein said compound is a dichloride salt.
20. (Cancelled)
21. (Cancelled)
22. (New) A method according to claim 1, wherein
 X^1 and X^2 are each independently bromo, chloro, iodo or fluoro;
 R^1 and R^2 are each independently hydrogen, methyl, ethyl, *n*-propyl, 1-methylethyl, *n*-butyl, 1,1-dimethylethyl, *n*-pentyl, or *n*-heptyl; and
 R^3 is hydrogen, amino, methylamino, ethylamino, propylamino, dimethylamino, methylethylamino, diethylamino, dipropylamino, ethylpropylamino, benzylamino, (3,4,5-trimethoxybenzyl)amino, (4-chlorobenzyl)amino, acetylamino, ethylcarbonylamino, *n*-propylcarbonylamino, ethenylcarbonylamino, prop-2-enylcarbonylamino, but-2-enylcarbonylamino, trifluoromethylcarbonylamino, trifluoromethylcarbonylamino, 2-bromoethylcarbonylamino, (4-methoxyphenyl)carbonylamino, (4-fluorophenyl)carbonylamino, (4-chlorophenyl)carbonylamino, alkoxyalkylcarbonylamino wherein the alkoxy and alkyl portions each have 1 to 8 carbon atoms, ethoxycarbonylmethylcarbonylamino, methoxycarbonylmethylcarbonylamino, (2-ethoxycarbonyl)ethylcarbonylamino, (2-methoxycarbonyl)ethylcarbonylamino, glycynamido, $-N(H)-C(O)-CH_2-N(H)R_a$, phenylcarbonylglycinamido, (4-fluoro-3-trifluoromethylphenyl)carbonylglycinamido, (4-fluorophenyl)carbonylglycinamido, aminocarbonylglycinamido, $-N(H)-C(O)-CH_2-N(R_a)-C(O)-NH_2$,

(methoxyacetyl)glycinamido, (ethoxyacetyl)glycinamido, ureido, -N(H)-C(O)-N(H)R_a, -N(R_a)-C(O)-NH₂, -N(H)-C(O)-N(H)R_b, -N(R_b)-C(O)-NH₂, -N(H)-C(O)-N(H)R_d, -N(R_d)-C(O)-NH₂, or alaninamido;

R_a is an alkyl radical having from one to eight carbon atoms;

R_b is a phenyl or naphthyl radical which is optionally substituted by one or more substituents selected from the group consisting of bromo, chloro, iodo or fluoro, alkyl having from one to eight carbon atoms, alkoxy having from one to eight carbon atoms, haloalkyl having from one to eight carbon atoms, haloalkoxy having from one to eight carbon atoms, nitro, amino, -N(H)R_a, and -N(R_a)R_a where each R_a is independently alkyl having from one to eight carbon atoms; and

R_d is an aralkyl group in which the alkyl portion has one to eight carbon atoms and the aryl portion is R_b;

wherein either one of X¹ or X² is selected from the group of ¹²³I, ¹²⁵I, ¹²⁸I, ¹³¹I, ⁷⁵Br, ⁷⁶Br, ⁸⁰Br and ¹⁸F or one of the carbon atoms in the compound is ¹¹C.

23. (New) A method according to claim 1, wherein

X¹ and X² are each independently bromo, chloro, iodo or fluoro; and

R¹ and R² are each independently hydrogen, methyl, ethyl, *n*-propyl, 1-methylethyl, *n*-butyl, 1,1-dimethylethyl, *n*-pentyl, or *n*-heptyl.

24. (New) A method according to claim 2, wherein in group R⁵ a linker moiety is present between said chelator and the remainder of the compound, wherein the linker moiety is an alkyl radical having one to ten carbon atoms, wherein the alkyl radical optionally contains one to ten -C(O)-groups, one to ten -C(O)N(R)- groups, one to ten -N(R)C(O)- groups, one to ten -N(R)- groups, one to ten -N(R)₂ groups, one to ten hydroxy groups, one to ten -C(O)OR- groups, one to ten oxygen atoms, one to ten sulfur atoms, one to ten nitrogen atoms, one to ten halogen atoms, and one to ten aryl groups.

25. (New) A method according to claim 10, wherein in group R⁵ a linker moiety is present between said chelator and the remainder of the compound, wherein the linker moiety is an alkyl radical having one to ten carbon atoms, wherein the alkyl radical optionally contains one to ten -C(O)-groups, one to ten -C(O)N(R)- groups, one to ten -N(R)C(O)- groups, one to ten -N(R)- groups, one to ten -N(R)₂ groups, one to ten hydroxy groups, one to ten -C(O)OR-

groups, one to ten oxygen atoms, one to ten sulfur atoms, one to ten nitrogen atoms, one to ten halogen atoms, and one to ten aryl groups.

26. (New) A method according to claim 11, wherein in group R⁵ a linker moiety is present between said chelator and the remainder of the compound, wherein the linker moiety is an alkyl radical having one to ten carbon atoms, wherein the alkyl radical optionally contains one to ten -C(O)-groups, one to ten -C(O)N(R)- groups, one to ten -N(R)C(O)- groups, one to ten -N(R)- groups, one to ten -N(R)₂ groups, one to ten hydroxy groups, one to ten -C(O)OR- groups, one to ten oxygen atoms, one to ten sulfur atoms, one to ten nitrogen atoms, one to ten halogen atoms and one to ten aryl groups.

27. (New) A method according to claim 1 wherein the radioactive does administered to said patient is 1 to 100 mCi per application.

28. (New) A method according to claim 2, wherein the radioactive does administered to said patient is 1 to 100 mCi per application.

29. (New) A method according to claim 3, wherein the radioactive does administered to said patient is 1 to 100 mCi per application.

30. (New) A method according to claim 4, wherein the radioactive does administered to said patient is 1 to 100 mCi per application.

31. (New) A method according to claim 1, wherein said compound is selected from the group consisting of the following:

1-(5-chloro-2-{2-[(2*R*)-4-(4-fluoro-¹⁸F-benzyl)-2-methylpiperazin-1-yl]-2-oxoethoxy}phenyl)urea;

1-(2-{2-[(2*R*)-4-(4-fluorobenzyl)-2-methylpiperazin-1-yl]-2-oxoethoxy}-5-iodo-¹²³I-phenyl)urea;

2-(2-amino-4-chlorophenoxy)-1-[(2*SR*,5*RS*)-4-(4-fluoro-¹⁸F-benzyl)-2,5-dimethylpiperazin-1-yl]ethan-1-one;

2-(2-amino-4-chlorophenoxy)-1-[(2*RS*,5*RS*)-4-(4-fluoro-¹⁸F-benzyl)-2,5-dimethylpiperazin-1-yl]ethan-1-one;

2-(2-amino-4-chlorophenoxy)-1-[(2*SR*,5*SR*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]ethan-1-one;

2-(2-amino-4-chlorophenoxy)-1-[(2*RS*,5*SR*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]ethan-1-one;

2-[4-chloro-2-(diethylamino)phenoxy]-1-[(2*SR*,5*RS*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]ethan-1-one;

2-[4-chloro-2-(diethylamino)phenoxy]-1-[(2*RS*,5*RS*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]ethan-1-one;

2-[4-chloro-2-(diethylamino)phenoxy]-1-[(2*SR*,5*SR*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]ethan-1-one;

2-[4-chloro-2-(diethylamino)phenoxy]-1-[(2*RS*,5*SR*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]ethan-1-one;

1-(5-chloro-2-{2-[(2*RS*,5*SR*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-3-(2,4-dichlorophenyl)urea;

1-(5-chloro-2-{2-[(2*SR*,5*SR*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-3-(2,4-dichlorophenyl)urea;

1-(5-chloro-2-{2-[(2*RS*,5*RS*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-3-(2,4-dichlorophenyl)urea;

1-(5-chloro-2-{2-[(2*SR*,5*RS*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-3-(2,4-dichlorophenyl)urea;

1-(5-chloro-2-{2-[(2*RS*,5*SR*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)urea;

1-(5-chloro-2-{2-[(2*SR*,5*SR*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)urea;

1-(5-chloro-2-{2-[(2*RS*,5*RS*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)urea;

1-(5-chloro-2-{2-[(2*SR*,5*RS*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)urea;

1-(5-chloro-2-{2-[(2*RS*,5*SR*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)urea;

1-(5-chloro-2-{2-[(2*SR*,5*SR*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)urea;

oxoethoxy}phenyl)urea;
 1-(5-chloro-2-{2-[(2*SR*,5*RS*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)urea;
 1-[(2*SR*,5*RS*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5,-dimethylpiperazin-1-yl]-2-(2-isopentylamino-4-chlorophenoxy)ethan-1-one;
 1-[(2*RS*,5*RS*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5,-dimethylpiperazin-1-yl]-2-(2-isopentylamino-4-chlorophenoxy)ethan-1-one;
 1-[(2*SR*,5*SR*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5,-dimethylpiperazin-1-yl]-2-(2-isopentylamino-4-chlorophenoxy)ethan-1-one;
 1-[(2*RS*,5*SR*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5,-dimethylpiperazin-1-yl]-2-(2-isopentylamino-4-chlorophenoxy)ethan-1-one;
N-(5-chloro-2-{2-[(2*SR*,5*RS*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-methylpropanamide;
N-(5-chloro-2-{2-[(2*RS*,5*RS*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-methylpropanamide;
N-(5-chloro-2-{2-[(2*SR*,5*SR*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-methylpropanamide;
N-(5-chloro-2-{2-[(2*RS*,5*SR*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-methylpropanamide;
N-(5-chloro-2-{2-[(2*SR*,5*RS*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-(methoxy)acetamide;
N-(5-chloro-2-{2-[(2*RS*,5*RS*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-(methoxy)acetamide;
N-(5-chloro-2-{2-[(2*SR*,5*SR*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-(methoxy)acetamide;
N-(5-chloro-2-{2-[(2*RS*,5*SR*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-(methoxy)acetamide;
(E)-*N*-(5-chloro-2-{2-[(2*RS*,5*SR*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-butenamide;
(E)-*N*-(5-chloro-2-{2-[(2*SR*,5*SR*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-butenamide;
(E)-*N*-(5-chloro-2-{2-[(2*RS*,5*RS*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-butenamide;

(E)-*N*-(5-chloro-2-{2-[(2*SR*,5*RS*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-butenamide;
methyl *N*-(5-chloro-2-{2-[(2*SR*,5*RS*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)succinamate;
methyl *N*-(5-chloro-2-{2-[(2*RS*,5*RS*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)succinamate;
methyl *N*-(5-chloro-2-{2-[(2*SR*,5*SR*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)succinamate;
methyl *N*-(5-chloro-2-{2-[(2*RS*,5*SR*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)succinamate;
ethyl *N*-(5-chloro-2-{2-[(2*SR*,5*RS*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)succinamate;
ethyl *N*-(5-chloro-2-{2-[(2*RS*,5*RS*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)succinamate;
ethyl *N*-(5-chloro-2-{2-[(2*SR*,5*SR*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)succinamate;
ethyl *N*-(5-chloro-2-{2-[(2*RS*,5*SR*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)succinamate;
N-(5-chloro-2-{2-[(2*SR*,5*RS*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)acetamide;
N-(5-chloro-2-{2-[(2*RS*,5*RS*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)acetamide;
N-(5-chloro-2-{2-[(2*SR*,5*SR*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)acetamide;
N-(5-chloro-2-{2-[(2*RS*,5*SR*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)acetamide;
N-(5-chloro-2-{2-[(2*SR*,5*RS*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)propanamide;
N-(5-chloro-2-{2-[(2*RS*,5*RS*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)propanamide;
N-(5-chloro-2-{2-[(2*SR*,5*SR*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)propanamide;
N-(5-chloro-2-{2-[(2*RS*,5*SR*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)propanamide;

oxoethoxy}phenyl)propanamide;
N-(5-chloro-2-{2-[(2*SR*,5*RS*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-3-fluorobenzamide;
N-(5-chloro-2-{2-[(2*RS*,5*RS*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-3-fluorobenzamide;
N-(5-chloro-2-{2-[(2*SR*,5*SR*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-3-fluorobenzamide;
N-(5-chloro-2-{2-[(2*RS*,5*SR*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-3-fluorobenzamide;
 1-(5-chloro-2-{2-[(2*SR*,5*RS*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-3-(*p*-tolyl)urea;
 1-(5-chloro-2-{2-[(2*RS*,5*RS*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-3-(*p*-tolyl)urea;
 1-(5-chloro-2-{2-[(2*SR*,5*SR*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-3-(*p*-tolyl)urea;
 1-(5-chloro-2-{2-[(2*RS*,5*SR*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-3-(*p*-tolyl)urea;
 1-(5-chloro-2-{2-[(2*RS*,5*SR*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-3-ethylurea;
 1-(5-chloro-2-{2-[(2*SR*,5*SR*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-3-ethylurea;
 1-(5-chloro-2-{2-[(2*RS*,5*RS*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-3-ethylurea;
 1-(5-chloro-2-{2-[(2*SR*,5*RS*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-3-ethylurea;
 1-benzyl-3-(5-chloro-2-{2-[(2*SR*,5*RS*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)urea;
 1-benzyl-3-(5-chloro-2-{2-[(2*RS*,5*RS*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)urea;
 1-benzyl-3-(5-chloro-2-{2-[(2*SR*,5*SR*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)urea;
 1-benzyl-3-(5-chloro-2-{2-[(2*RS*,5*SR*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)urea;

1-(5-chloro-2-{2-[(2*RS*,5*SR*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-3-(4-nitrophenyl)urea;

1-(5-chloro-2-{2-[(2*SR*,5*SR*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-3-(4-nitrophenyl)urea;

1-(5-chloro-2-{2-[(2*RS*,5*RS*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-3-(4-nitrophenyl)urea;

1-(5-chloro-2-{2-[(2*SR*,5*RS*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-3-(4-nitrophenyl)urea;

2-(2-benzylamino-4-chlorophenoxy)-1-[(2*SR*,5*RS*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]ethan-1-one;

2-(2-benzylamino-4-chlorophenoxy)-1-[(2*RS*,5*RS*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]ethan-1-one;

2-(2-benzylamino-4-chlorophenoxy)-1-[(2*SR*,5*SR*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]ethan-1-one;

2-(2-benzylamino-4-chlorophenoxy)-1-[(2*RS*,5*SR*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]ethan-1-one;

N-(5-chloro-2-{2-[(2*RS*,5*SR*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)glycinamide;

N-(5-chloro-2-{2-[(2*SR*,5*RS*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)glycinamide;

N-(5-chloro-2-{2-[(2*SR*,5*SR*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)glycinamide;

N-(5-chloro-2-{2-[(2*RS*,5*RS*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)glycinamide;

1-(5-chloro-2-{2-[(2*R*)-4-(4-fluoro-¹⁸*F*-benzyl)-2-methylpiperazin-1-yl]-2-oxoethoxy}phenyl)urea;

1-(5-chloro-2-{2-[(2*S*)-4-(4-fluoro-¹⁸*F*-benzyl)-2-methylpiperazin-1-yl]-2-oxoethoxy}phenyl)urea;

N-(5-chloro-2-{2-[(2*RS*,5*SR*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-(methylamino)acetamide;

N-(5-chloro-2-{2-[(2*SR*,5*SR*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-(methylamino)acetamide;

N-(5-chloro-2-{2-[(2*RS*,5*RS*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-

oxoethoxy}phenyl)-2-(methylamino)acetamide;
N-(5-chloro-2-{2-[(2*SR*,5*RS*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethyl-piperazin-1-yl]-2-oxoethoxy}phenyl)-2-(methylamino)acetamide;
 2-bromo-*N*-(5-chloro-2-{(2*SR*,5*RS*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)acetamide;
 2-bromo-*N*-(5-chloro-2-{(2*RS*,5*RS*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)acetamide;
 2-bromo-*N*-(5-chloro-2-{(2*SR*,5*SR*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)acetamide;
 2-bromo-*N*-(5-chloro-2-{(2*RS*,5*SR*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)acetamide;
N-(5-chloro-2-{2-[(2*RS*,5*SR*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-(ureido)acetamide;
N-(5-chloro-2-{2-[(2*SR*,5*SR*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-(ureido)acetamide;
N-(5-chloro-2-{2-[(2*RS*,5*RS*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-(ureido)acetamide;
N-(5-chloro-2-{2-[(2*SR*,5*RS*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-(ureido)acetamide;
N-(5-chloro-2-{2-[(2*RS*,5*SR*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-(1-methylureido)acetamide;
N-(5-chloro-2-{2-[(2*SR*,5*SR*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-(1-methylureido)acetamide;
N-(5-chloro-2-{2-[(2*RS*,5*RS*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-(1-methylureido)acetamide;
N-(5-chloro-2-{2-[(2*SR*,5*SR*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-(1-methylureido)acetamide;
 (2*RS*)-*N*-(5-chloro-2-{2-[(2*RS*,5*SR*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-aminopropanamide;
 (2*SR*)-*N*-(5-chloro-2-{2-[(2*RS*,5*SR*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-aminopropanamide;
 (2*RS*)-*N*-(5-chloro-2-{2-[(2*SR*,5*SR*)-4-(4-fluoro-¹⁸*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-aminopropanamide;

(2SR)-N-(5-chloro-2-{2-[(2SR,5SR)-4-(4-fluoro-¹⁸F-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-aminopropanamide;
(2RS)-N-(5-chloro-2-{2-[(2RS,5RS)-4-(4-fluoro-¹⁸F-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-aminopropanamide;
(2SR)-N-(5-chloro-2-{2-[(2RS,5RS)-4-(4-fluoro-¹⁸F-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-aminopropanamide;
(2RS)-N-(5-chloro-2-{2-[(2SR,5RS)-4-(4-fluoro-¹⁸F-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-aminopropanamide;
(2SR)-N-(5-chloro-2-{2-[(2SR,5RS)-4-(4-fluoro-¹⁸F-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-aminopropanamide;
N-(5-chloro-2-{2-[(2SR,5RS)-4-(4-fluoro-¹⁸F-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-(2,4-difluorobenzoylamino)acetamide;
N-(5-chloro-2-{2-[(2RS,5RS)-4-(4-fluoro-¹⁸F-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-(2,4-difluorobenzoylamino)acetamide;
N-(5-chloro-2-{2-[(2SR,5SR)-4-(4-fluoro-¹⁸F-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-(2,4-difluorobenzoylamino)acetamide;
N-(5-chloro-2-{2-[(2RS,5SR)-4-(4-fluoro-¹⁸F-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-(2,4-difluorobenzoylamino)acetamide;
N-(5-chloro-2-{2-[(2SR,5RS)-4-(4-fluoro-¹⁸F-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-(methoxyacetylaminio)acetamide;
N-(5-chloro-2-{2-[(2RS,5RS)-4-(4-fluoro-¹⁸F-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-(methoxyacetylaminio)acetamide;
N-(5-chloro-2-{2-[(2SR,5SR)-4-(4-fluoro-¹⁸F-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-(methoxyacetylaminio)acetamide;
N-(5-chloro-2-{2-[(2SR,5RS)-4-(4-fluoro-¹⁸F-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-(methoxyacetylaminio)acetamide;
N-(5-chloro-2-{2-[(2SR,5SR)-4-(4-fluoro-¹⁸F-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-(2-iodobenzoylamino)acetamide;
N-(5-chloro-2-{2-[(2RS,5RS)-4-(4-fluoro-¹⁸F-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-(2-iodobenzoylamino)acetamide;
N-(5-chloro-2-{2-[(2SR,5SR)-4-(4-fluoro-¹⁸F-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-(2-iodobenzoylamino)acetamide;
N-(5-chloro-2-{2-[(2RS,5SR)-4-(4-fluoro-¹⁸F-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-(2-iodobenzoylamino)acetamide;

oxoethoxy}phenyl)-2-(2-iodobenzoylamino)acetamide;

N-(5-chloro-2-{2-[(2*R*)-4-(4-fluoro-¹⁸*F*-benzyl)-2-methylpiperazin-1-yl]-2-

oxoethoxy}phenyl)glycinamide;

N-(5-chloro-2-{2-[(2*S*)-4-(4-fluoro-¹⁸*F*-benzyl)-2-methylpiperazin-1-yl]-2-

oxoethoxy}phenyl)glycinamide; and

mono- and dichloride salts thereof.--

32. (New) A method according to claim 1, wherein said compound is selected from the group consisting of the following:

N'-(mercaptoeth-1-yl)-*N'*-(5-mercapto-3-aza-2-oxopent-1-yl)-*N*-{5-chloro-2-[2-[4-(4-fluorobenzyl)-2-(2*R*)-methylpiperazin-1-yl]-2-oxoethoxy]phen-1-yl}glycylglycinamide, technetium-99m-complex;

N'-(2-mercaptoeth-1-yl)-*N'*-(5-mercapto-3-aza-2-oxopent-1-yl)-*N*-{5-chloro-2-[2-[4-(4-fluorobenzyl)-2-(2*R*)-methylpiperazin-1-yl]-2-oxoethoxy]phen-1-yl}glycinamide, technetium-99m-complex;

N-(2-mercaptoeth-1-yl)-*N*-(5-mercapto-3-azapent-1-yl)-*N*-{5-chloro-2-[2-[4-(4-fluorobenzyl)-2-(2*R*)-methylpiperazin-1-yl]-2-oxoethoxy]phen-1-yl}glycinamide, technetium-99m-complex; and

mono- and dichloride salts thereof.